

## ABSTRACT OF THE DISCLOSURE

A technique gracefully shuts down network resources, such as nodes, interfaces and protocols, in a data network in a manner that minimizes network disruption. The technique may be used with both connectionless and connection-oriented networking systems. A node gracefully shuts down a network resource associated with the node by i) notifying other nodes in the network that the resource is being gracefully shutdown, ii) waiting for a condition to occur, and iii) when the condition occurs, shutting down the resource. The condition may include the expiration of a predetermined amount of time and/or monitoring the resource to determine if the resource has reached a certain level of activity. In response to receiving a notification that a resource is being gracefully shut-down, a node takes action to reroute traffic around the resource. If no alternative route is available, the node may continue to route traffic to the resource until it is shut down.